

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

(1) (original) A packet communication method for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized by comprising the steps of:

a first communication node's selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

the second communication node's comparing an error detection code C generated by performing the prescribed error detection code operation on a received packet with an error detection code F1 contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C and F1 coincide with each other, comparing the error detection code C generated by performing the prescribed error detection code operation on the received packet with an error detection code F2 obtained by performing an inverse operation for returning a result of the prescribed operation to an original on the error detection code F1 contained in the FCS field of the received packet, and performing reception

processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C and F2 coincide with each other.

(2) (original) A packet communication method for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized by comprising the steps of:

a first communication node's selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

the second communication node's comparing an error detection code C generated by performing the prescribed error detection code operation on a received packet with an error detection code F1 contained in the FCS field of the received packet and an error detection code F2 obtained by performing an inverse operation for returning a result of the prescribed operation to an original on the error detection code F1 contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C and F1 coincide with each other, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C and F2 coincide with each other.

(3) (original) A packet communication method for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized by comprising the steps of:

a first communication node's selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

the second communication node's comparing an error detection code C1 generated by performing the prescribed error detection code operation on a received packet with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, comparing an error detection code C2 obtained by performing the prescribed operation on the error detection code generated by performing the prescribed error detection code operation on the received packet with the error detection code F contained in the FCS field of the received packet, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(4) (original) A packet communication method for transmitting, between a plurality of communication nodes, a packet including a data field containing

information to be transmitted and an FCS field containing an error detection code, characterized by comprising the steps of:

a first communication node's selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

the second communication node's comparing an error detection code C1 generated by performing the prescribed error detection code operation on a received packet and an error detection code C2 obtained by performing the prescribed operation on the error detection code C1 with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(5) (original) A packet communication method for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized by comprising the steps of:

a first communication node's selectively transmitting, to a second communication node, a first packet containing, in the FCS field, an error detection code generated by performing a first error detection code operation on a

transmission packet or a second packet containing, in the FCS field, an error detection code generated by performing a second error detection code operation on the transmission packet; and

the second communication node's comparing an error detection code C1 generated by performing the first error detection code operation on a received packet with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, comparing an error detection code C2 generated by performing the second error detection code operation on the received packet with the error detection code F contained in the FCS field of the received packet, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(6) (original) A packet communication method for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized by comprising the steps of:

a first communication node's selectively transmitting, to a second communication node, a first packet containing, in the FCS field, an error detection code generated by performing a first error detection code operation on a transmission packet or a second packet containing, in the FCS field, an error detection code generated by performing a second error detection code operation on the transmission packet; and

the second communication node's comparing an error detection code C1 generated by performing the first error detection code operation on a received packet and an error detection code C2 generated by performing the second error detection code operation on the received packet with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(7) (original) The packet communication method according to any one of claims 1 to 4, characterized in that the prescribed operation to be performed on the first error detection code is at least one of reversing all bits of the first error detection code, reversing partial bits of the first error detection code, adding a prescribed value to the first error detection code, and subtracting a prescribed value from the first error detection code.

(8) (original) The packet communication method according to claim 7, characterized in that two or more kinds of packets are generated as the second packet containing, in the FCS field, the second error detection code obtained by performing the prescribed operation on the first error detection code by combining prescribed operations and addition and subtraction of plural kinds of prescribed values, and three or more kinds of packets including the first packet are transmitted and received between the first and second communication nodes.

(9) (currently amended) The packet communication method according to claim 5 or 6, characterized in that the first error detection code operation and the second error detection code operation employ different parameters to produce different error detection codes, and three or more kinds of packets containing, in the FCS fields, error detection codes generated by using three or more kinds of parameters, respectively, are transmitted and received between the first and second communication nodes.

(10) (original) A packet communication method characterized in that three or more kinds of packets are generated by combining the kind of prescribed operation to be performed on the first error detection code recited in any one of claims 1 to 4 and the kinds of error detection code operations recited in claim 5 or 6, and are transmitted and received between the first and second communication nodes.

(11) (currently amended) The packet communication method according to any one of claims 1 to 4 or 6, characterized in:

that the first and second packets or the three or more kinds of packets are different from each other in frame format;

that the first communication node puts, into the FCS field of a packet to be transmitted, an error detection code generated by an operation corresponding to a frame format of the packet to be transmitted; and

that the second communication node recognizes a frame format of a received packet by performing an operation on an error detection code of the received packet,

and performs reception processing on the received packet on the basis of the recognized frame format.

(12) - (26) (cancelled)

(27) (currently amended) The packet communication method according to any one of claims 1 to ~~40~~ 6, characterized in:

that the first and second packets or the three or more kinds of packets have error detection codes generated by operations that are different from each other so as to correspond to respective destinations;

that the first communication node puts, into the FCS field of a packet to be transmitted, an error detection code generated by an operation corresponding to a destination of the packet to be transmitted; and

that the second communication node performs reception processing on a packet directed to itself that is recognized by performing an operation on an error detection code of a received packet.

(28) (currently amended) The packet communication method according to any one of claims 1 to ~~40~~ 6, characterized in:

that the first and second packets or the three or more kinds of packets have error detection codes generated by operations that are different from each other so as to correspond to the respective kinds of packets;

that the first communication node puts, into the FCS field of a packet to be transmitted, an error detection code generated by an operation corresponding to a kind of the packet to be transmitted; and

that the second communication node performs reception processing on a packet of a kind that is recognized by performing an operation on an error detection code of a received packet.

(29) - (32) (cancelled)

(33) (original) A packet communication apparatus for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized in:

that a first communication node comprises means for selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

that the second communication node comprises means for comparing an error detection code C generated by performing the prescribed error detection code operation on a received packet with an error detection code F1 contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C and F1 coincide with each other, comparing the error detection code C generated by performing the prescribed error detection code operation on the received packet with an error detection code F2 obtained by performing an inverse operation for returning a result of the prescribed operation to an original on the error

detection code F1 contained in the FCS field of the received packet, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C and F2 coincide with each other.

(34) (original) A packet communication apparatus for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized in

that a first communication node comprises means for selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

that the second communication node comprises means for comparing an error detection code C generated by performing the prescribed error detection code operation on a received packet with an error detection code F1 contained in the FCS field of the received packet and an error detection code F2 obtained by performing an inverse operation for returning a result of the prescribed operation to an original on the error detection code F1 contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C and F1 coincide with each other, and performing reception processing on the received packet with an

understanding that it is classified as the second packet if the error detection codes C and F2 coincide with each other.

(35) (original) A packet communication apparatus for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized in:

that a first communication node comprises means for selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

that the second communication node comprises means for comparing an error detection code C1 generated by performing the prescribed error detection code operation on a received packet with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, comparing an error detection code C2 obtained by performing the prescribed operation on the error detection code generated by performing the prescribed error detection code operation on the received packet with the error detection code F contained in the FCS field of the received packet, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(36) (original) A packet communication apparatus for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized in:

that a first communication node comprises means for selectively transmitting, to a second communication node, a first packet containing, in the FCS field, a first error detection code generated by performing a prescribed error detection code operation on a transmission packet or a second packet containing, in the FCS field, a second error detection code obtained by performing a prescribed operation on the first error detection code; and

that the second communication node comprises means for comparing an error detection code C1 generated by performing the prescribed error detection code operation on a received packet and an error detection code C2 obtained by performing the prescribed operation on the error detection code C1 with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(37) (original) A packet communication apparatus for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized in:

that a first communication node comprises means for selectively transmitting, to a second communication node, a first packet containing, in the FCS field, an error detection code generated by performing a first error detection code operation on a transmission packet or a second packet containing, in the FCS field, an error detection code generated by performing a second error detection code operation on the transmission packet; and

that the second communication node comprises means for comparing an error detection code C1 generated by performing the first error detection code operation on a received packet with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, comparing an error detection code C2 generated by performing the second error detection code operation on the received packet with the error detection code F contained in the FCS field of the received packet, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(38) (original) A packet communication apparatus for transmitting, between a plurality of communication nodes, a packet including a data field containing information to be transmitted and an FCS field containing an error detection code, characterized in:

that a first communication node comprises means for selectively transmitting, to a second communication node, a first packet containing, in the FCS field, an error detection code generated by performing a first error detection code operation on a

transmission packet or a second packet containing, in the FCS field, an error detection code generated by performing a second error detection code operation on the transmission packet; and

that the second communication node comprises means for comparing an error detection code C1 generated by performing the first error detection code operation on a received packet and an error detection code C2 generated by performing the second error detection code operation on the received packet with an error detection code F contained in the FCS field of the received packet, performing reception processing on the received packet with an understanding that it is classified as the first packet if the error detection codes C1 and F coincide with each other, and performing reception processing on the received packet with an understanding that it is classified as the second packet if the error detection codes C2 and F coincide with each other.

(39) (original) The packet communication apparatus according to any one of claims 33 to 36, characterized in that the prescribed operation to be performed on the first error detection code is at least one of reversing all bits of the first error detection code, reversing partial bits of the first error detection code, adding a prescribed value to the first error detection code, and subtracting a prescribed value from the first error detection code.

(40) (original) The packet communication apparatus according to claim 39, characterized in that two or more kinds of packets are generated as the second packet containing, in the FCS field, the second error detection code obtained by performing the prescribed operation on the first error detection code by combining

prescribed operations and addition and subtraction of plural kinds of prescribed values, and three or more kinds of packets including the first packet are transmitted and received between the first and second communication nodes.

(41) (currently amended) The packet communication apparatus according to claim 37 ~~or 38~~, characterized in that the first error detection code operation and the second error detection code operation employ different parameters to produce different error detection codes, and three or more kinds of packets containing, in the FCS fields, error detection codes generated by using three or more kinds of parameters, respectively, are transmitted and received between the first and second communication nodes.

(42) (original) A packet communication apparatus characterized in that three or more kinds of packets are generated by combining the kind of prescribed operation recited in any one of claims 33 to 36 to be performed on the first error detection code and the kinds of error detection code operations recited in claim 37 or 38, and are transmitted and received between the first and second communication nodes.

(43) (currently amended) The packet communication apparatus according to any one of claims 33 to ~~42~~ 38, characterized in:

that the first and second packets or the three or more kinds of packets are different from each other in frame format;

that the first communication node further comprises means for putting, into the FCS field of a packet to be transmitted, an error detection code generated by an operation corresponding to a frame format of the packet to be transmitted; and

that the second communication node further comprises means for recognizing a frame format of a received packet by performing an operation on an error detection code of the received packet, and for performing reception processing on the received packet on the basis of the recognized frame format.

(44) - (58) (cancelled)

(59) (currently amended) The packet communication apparatus according to any one of claims 33 to ~~42~~ 38, characterized in:

that the first and second packets or the three or more kinds of packets have error detection codes generated by operations that are different from each other so as to correspond to respective destinations;

that the first communication node further comprises means for putting, into the FCS field of a packet to be transmitted, an error detection code generated by an operation corresponding to a destination of the packet to be transmitted; and

that the second communication node further comprises means for performing reception processing on a packet directed to itself that is recognized by performing an operation on an error detection code of a received packet.

(60) (currently amended) The packet communication apparatus according to any one of claims 33 to ~~42~~ 38, characterized in:

that the first and second packets or the three or more kinds of packets have error detection codes generated by operations that are different from each other so as to correspond to the respective kinds of packets;

that the first communication node further comprises means for putting, into the FCS field of a packet to be transmitted, an error detection code generated by an operation corresponding to a kind of the packet to be transmitted; and

that the second communication node further comprises means for performing reception processing on a packet of a kind that is recognized by performing an operation on an error detection code of a received packet.

(61) - (64) (cancelled)

(65) (new) The packet communication method according to claim 6, characterized in that the first error detection code operation and the second error detection code operation employ different parameters to produce different error detection codes, and three or more kinds of packets containing, in the FCS fields, error detection codes generated by using three or more kinds of parameters, respectively, are transmitted and received between the first and second communication nodes.

(66) (new) The packet communication apparatus according to claim 38, characterized in that the first error detection code operation and the second error detection code operation employ different parameters to produce different error detection codes, and three or more kinds of packets containing, in the FCS fields, error detection codes generated by using three or more kinds of parameters, respectively, are transmitted and received between the first and second communication nodes.